

SERIAL NO. 10/072,923

DOCKET NO. 1567.1026

INTRODUCTION:REMARKS

In accordance with the foregoing, claims 3, 11, and 26 have been cancelled without prejudice or disclaimer, and claims 1, 6, 12, and 23-25 have been amended. Claims 1, 6 and 25 have been amended to include the features of existing claims 3, 11 and 26, and claim 24 has been amended to correct a typographical error. No new matter is being presented, and approval and entry of the foregoing amendments are respectfully requested.

Claims 1, 4-6, 8-10, 12-25, 27, and 28 are pending and under consideration.  
Reconsideration is requested.

ENTRY OF AMENDMENT UNDER 37 C.F.R. §1.116:

Applicants request entry of this Rule 116 Response because:

- (1) the amendments of claims 1, 6, and 23-25 should not entail any further search by the Examiner since no new features are being added or no new issues are being raised; and
- (2) the amendments do not significantly alter the scope of the claims and place the application at least into a better form for purposes of appeal. No new features or new issues are being raised.

The Manual of Patent Examining Procedures sets forth in Section 714.12 that "any amendment that would place the case either in condition for allowance or in better form for appeal may be entered." Moreover, Section 714.13 sets forth that "the Proposed Amendment should be given sufficient consideration to determine whether the claims are in condition for allowance and/or whether the issues on appeal are simplified." The Manual of Patent Examining Procedures further articulates that the reason for any non-entry should be explained expressly in the Advisory Action.

**SERIAL NO. 10/072,923****DOCKET NO. 1567.1026****REJECTION UNDER 35 U.S.C. §112:**

In the Office Action at pages 3-4, the Examiner rejects claims 1, 3-6, 8-16, 23, 25-28 under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement in regards to whether the surface treatment layer does not include lithium. This rejection is respectfully traversed and reconsideration is requested.

As a point of clarification, claims 3, 11, and 26 have been canceled without prejudice or disclaimer. Therefore, it is respectfully submitted that the rejection of these claims is deemed moot.

As a general matter, the requirements of 35 U.S.C. §112, first paragraph, are that the written description demonstrate to one of ordinary skill in the art that the inventor is in possession of the invention itself. MPEP 2163.02. In the instant specification, even assuming arguendo that lithium can be used in a surface treatment layer, paragraph 0023 describes the use of Mg, Al, Co, K, Na, Ca, Si, Ti, Sn, V, Ge, Ga, B, As, and Zr in the surface treatment layer. As such, the specification further teaches the use of surface treatment layers of Mg, Al, Co, K, Na, Ca, Si, Ti, Sn, V, Ge, Ga, B, As, and Zr. Moreover, in Examples 1 through 13, surface treatment layers were prepared which did not include lithium. For instance, in Example 1, the positive electrode precursor film was dipped in an Al-isopropoxide ethanol suspension. In the Example, there is no suggestion that lithium was also included in the suspension such that a surface treatment layer was formed which did not include lithium. Therefore, even assuming arguendo that the Examiner is correct in that lithium can be used in one form of the surface treatment layers, the specification supports surface treatment layers that do not include lithium. As such, it is respectfully submitted that, due at least to these Examples, the specification supports the claims as previously presented sufficient for the purposes of 35 U.S.C. §112, first paragraph and that the Examiner has not provided sufficient evidence to support a rejection of the claims under 35 U.S.C. §112 using the factors set forth in the MPEP 2136.04.

However, while it is respectfully submitted that the Examiner has not provided a prima

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facie case for invalidity of the claims under 35 U.S.C. §112, in order to expedite prosecution, claims 1, 6, 23 and 25 have been amended to remove the feature noted by the Examiner so as to broaden at least this aspect of the invention.

For similar reasons, it is respectfully submitted that claims 4-6, 8-10, 12-16, 23, 25, 27, and 28 are compliant with 35 U.S.C. §112, first paragraph.

**REJECTION UNDER 35 U.S.C. §103:**

In the Office Action at page 5, the Examiner rejects claim 17 under 35 U.S.C. §103 in view of Amatucci et al. (U.S. Patent No. 5,705,291) and Jen (U.S. Patent Publication No. 2002/71913). The rejection is respectfully traversed and reconsideration is requested.

By way of review, Amatucci et al. teaches coating  $\text{LiMn}_2\text{O}_4$  particulates with a thin film to reduce the contact between an electrolyte and a surface of the  $\text{LiMn}_2\text{O}_4$  particulate. As an example of producing such a coated  $\text{LiMn}_2\text{O}_4$  particulate, in Example 1,  $\text{LiMn}_2\text{O}_4$  powder was mixed by grinding a 1% mixture of  $\text{H}_3\text{BO}_3$  and heating the mixture at 800°C to form an amorphous borate film on surfaces of the  $\text{LiMn}_2\text{O}_4$  particulates. (Col. 4, lines 1-16 and 31-44). However, there is no suggestion that, in order to coat the particles, the  $\text{LiMn}_2\text{O}_4$  particulate is coated on a current collector, and the coated current collector is coated with the borate film.

In contrast, claim 17 recites, among other features, "coating a current collector with a positive active material composition to form a positive active material layer" and "dipping the current collector having the positive active material layer in a liquid, the liquid comprising one of A1 and B." As such, even assuming arguendo that the Examiner is correct in that Jen teaches dip coating a current collector in order to provide a coating of the active material on the current collector, it is respectfully submitted that the combination of Amatucci et al. and Jen does not disclose or suggest the invention recited in claim 17.

Moreover, on page 5 of the Office Action, the Examiner asserts that one of ordinary skill in the art would have been motivated to dip coat an active material on the current collector of an

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electrode since such dipping uniformly distributes the thickness of the coating and increases adhesion between the collector and the active material as suggested by paragraphs 0004 and 0005 of Jen. However, it is noted that the advantages suggested by Jen are in the context of applying a single active material to a substrate as shown in FIG. 2. There is no suggestion that such advantages apply, or would be desirable, in the context of applying a coating to a coated current collector as opposed to a bare current collector. There is further no suggestion that the coating of the coated current collector would be desirable instead of the solution suggested by Amatucci et al. in coating the LiMn<sub>2</sub>O<sub>4</sub>, and then using the coated LiMn<sub>2</sub>O<sub>4</sub> in an electrode. As such, it is respectfully submitted that the Examiner has not provided sufficient evidence of a motivation to combine Amatucci et al. and Jen to arrive at the recited invention of claim 17 as is required to maintain a *prima facie* obviousness rejection under 35 U.S.C. §103.

In the Office Action at pages 6-7, the Examiner rejects claims 17-22 under 35 U.S.C. §103 in view of Kweon et al. (U.S. Patent Publication No. 2002/76486) and Jen. The rejection is respectfully traversed and reconsideration is requested.

Kweon et al. appears to qualify as prior art under 35 U.S.C. §102(e). In addition, it is noted that Kweon et al. was owned by the same person or subject to an obligation of assignment to the same entity with the instant application at the time the invention of the instant application was made. Under 35 U.S.C. §103(c), “[s]ubject matter developed by another person, which qualifies as prior art only under one or more subsections (e), (f), and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.” MPEP 2146, EXAMINATION GUIDELINES FOR 35 U.S.C. 102(E), AS AMENDED BY THE AMERICAN INVENTORS PROTECTION ACT OF 1999, AND FURTHER AMENDED BY THE INTELLECTUAL PROPERTY AND HIGH TECHNOLOGY TECHNICAL AMENDMENTS ACT OF 2002, AND 35 U.S.C. 102(G), 1266 OG 77 (January 14, 2003). As such, it is respectfully submitted that Kweon et al. is not available as prior art for use in an obviousness

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rejection under 35 U.S.C. §103. Since Jen is not relied upon as disclosing all of the features of claims 17-22, it is respectfully requested that the Examiner reconsider and withdraw the rejection of claims 17-22 in view of Kweon et al. and Jen.

**STATUS OF CLAIMS NOT REJECTED IN OFFICE ACTION**

On page 4 of the Office Action, the Examiner states that claim 24 is allowed. Further, consistent with the Examiner's statement on pages 2 and 4 of the Office Action and in view of the above arguments in regards to the patentability of claim 17 over Amatucci et al. and Jen, it is respectfully submitted that the amendment to claims 1, 6, and 23-25 makes at least claims 1, 4-6, 8-16, 23, 25, 27, and 28 allowable over the art of record and otherwise places the application in condition for allowance.

**CONCLUSION:**

In accordance with the foregoing, it is respectfully submitted that all outstanding objections and rejections have been overcome and/or rendered moot. And further, that all pending claims patentably distinguish over the prior art. Thus, there being no further outstanding objections or rejections, the application is submitted as being in condition for allowance which action is earnestly solicited. At a minimum, this Amendment should be entered at least for purposes of Appeal as it either clarifies and/or narrows the issues for consideration by the Board.

If the Examiner has any remaining issues to be addressed, it is believed that prosecution can be expedited and possibly concluded by the Examiner contacting the undersigned attorney for a telephone interview to discuss any such remaining issues.

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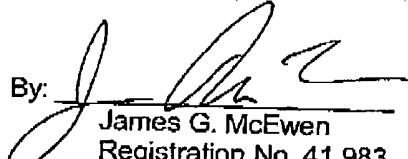
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If there are any additional fees associated with the filing of this Response, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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